

APPENDIX R

ANALYSIS OF RANCH BUDGETS

DEVELOPMENT OF BUDGETS

Average ranch budgets for four ranch sizes in the Garnet RA were developed from average budgets for this region developed for 1982 by the USDA Economic Research Service (ERS). Each ranch operation was categorized based on herd size information contained in the BLM's Range Management Automated System (RMAS). Ranch herd sizes within each category were averaged and the ERS budgets were modified based upon these herd sizes. These derived budgets are shown in Tables R-1 through R-12. These budgets were then used as the base information to be optimized in a ranch budget linear programming model. Once a baseline optimum level was established for each ranch size, the BLM grazing level was varied and the model was run again to determine the changes in ranch income over variable costs. This was done for no grazing and for the average changes in each ranch size category.

RANCH BUDGETS

Size Class 1

Size Class 1 includes ranches with fewer than 100 cattle. The average ranch in this class has a herd of 61 cattle, 24 cows per bull, a 92 percent calving rate, a 6 percent calf loss, a 2 percent cow loss, and an 11 percent replacement rate. It is projected that it would cost about \$9,000 to produce about \$16,000 worth of marketable cattle, if fixed costs are not considered. Table R-1 shows production receipts; Table R-2, variable costs; and Table R-3, fixed costs of an average ranch in Size Class 1.

Size Class 2

Size Class 2 includes ranches with 101 to 250 cattle. The average ranch in this class has a herd of 193 cattle, 25 cows per bull, a 90 percent calving rate, a 6.5 percent calf loss, a 1.7 percent cow loss, and an 11 percent replacement rate. It is projected that it would cost about \$23,000 to produce about \$49,000 worth of marketable cattle, if fixed costs are not considered. Table R-4 shows production receipts; Table R-5, variable costs; and Table R-6, fixed costs of an average ranch in Size Class 2.

Size Class 3

Size Class 3 includes ranches with 251 to 500 cattle. The average ranch in this class has a herd of 323 cattle, 25 cows per bull, a 90 percent calving rate, a 7.3 percent calf loss, a 1.7 percent cow loss, and an 11 percent replacement rate. It is projected that it would cost about \$46,000 to produce about \$82,000 worth of marketable cattle, if fixed costs were not considered. Table R-7 shows production receipts; Table R-8, variable costs; and Table R-9, fixed costs of an average ranch in Size Class 3.

Size Class 4

Size Class 4 includes ranches with over 500 cattle. The average ranch in this class has a herd of 770 cattle, 23 cows per bull, a 90 percent calving rate, a 5.8 percent calf loss, a 2 percent cow loss, and a 10 percent replacement rate. It is projected that it would cost about \$66,000 to produce about \$198,000 worth of marketable cattle, if fixed costs were not considered. Table R-10 shows production receipts; Table R-11, variable costs; and Table R-12, fixed costs of an average ranch in Size Class 4.

TABLE R-1

PRODUCTION RECEIPTS FOR AN AVERAGE RANCH IN SIZE CLASS 1

Production Item	CWT*	Price/Cwt	Number of Head	Total Value	Value/Brood Cow
Steer Calves	5.18	63.75	26	8,585.85	
Heifer Calves	4.96	55.25	19	5,206.76	
Cull Cows	10.00	36.15	6	<u>2,169.00</u>	
Total Receipts				15,961.61	261.66

*CWT = hundred weight.

TABLE R-2
VARIABLE COSTS FOR AN AVERAGE RANCH IN SIZE CLASS 1

Item	Units	Number of Units	Price	Value	Cost/Brood Cow
Pub. Graz. BLM	AUMs	73	1.86	135.78	2.23
Private Range	AUMs	375	0	0	0
Past. Rent/Lease	AUMs	161	9.45	1,521.45	24.94
Hay (Produced)	TN	6.55	17.35	1,136.43	18.63
Hay (Purchased)	TN	8	63.12	504.96	8.28
Protein Supp.	TN	2.14	230.00	492.66	8.08
Barley	BU	105.84	2.15	227.56	3.73
Salt & Minerals	CWT	20.4	5.62	114.72	1.88
Vet Medicine	Dol	490.14	1.00	490.14	8.04
Trucking	Dol	100.80	1.00	100.80	1.65
Marketing	Dol	253.26	1.00	253.26	4.15
Hired Labor	Hr	0	4.10	0	0
Mach. Fuel & Lube				1,521.97	24.95
Mach. Repair				954.22	15.64
Equip. Fuel & Lube				52.92	.87
Equip. Repair				922.74	15.13
Interest on Opr. Capital	Dol	8,537.09	0.11	939.08	15.39
Total Variable Costs				9,368.69	153.59

TABLE R-3
FIXED COSTS FOR AN AVERAGE RANCH IN SIZE CLASS 1

Ownership Costs	Value	Cost/Brood Cow
Machinery	2,779.88	45.57
Equipment	3,572.60	58.58
Livestock	1,916.84	31.42
Land Taxes	389.58	6.39
Total Ownership Costs	8,658.90	141.96
Other Costs	11,208.98	183.75
Total of All Costs	29,236.57	479.29

TABLE R-4

PRODUCTION RECEIPTS FOR AN AVERAGE RANCH IN SIZE CLASS 2

Production Item	CWT*	Price/Cwt	Number of Head	Total Value	Value/Brood Cow
Steer Calves	5.18	63.75	80	26,418.00	
Heifer Calves	4.96	55.25	54	14,798.16	
Cull Cows	10.00	36.15	21	7,591.50	
Total Receipts				48,807.66	252.89

*CWT = hundred weight

TABLE R-5

VARIABLE COSTS FOR AN AVERAGE RANCH IN SIZE CLASS 2

Item	Units	Number of Units	Price	Value	Cost/Brood Cow
Pub. Graz. BLM	AUMs	116	1.86	215.76	1.12
Private Range	AUMs	1,218	0	0	0
Past. Rent/Lease	AUMs	600	9.45	5,670.00	29.38
Hay (Produced)	TN	49.75	18.00	895.50	4.64
Hay (Purchased)	TN	4.25	63.12	268.26	1.39
Protein Supp.	TN	4.2	230.00	966.00	5.00
Barley	BU	420.0	2.15	903.00	4.68
Salt & Minerals	CWT	70.9	5.62	398.46	2.06
Vet Medicine	Dol	2,062.0	1.00	2,062.00	10.68
Trucking	Dol	329.0	1.00	329.00	1.70
Marketing	Dol	826.0	1.00	826.00	4.28
Hired Labor	Hr	0	4.10	0	0
Mach. Fuel & Lube				3,176.41	16.46
Mach. Repair				2,013.84	10.43
Equip. Fuel & Lube				78.05	.40
Equip. Repair				1,069.19	5.54
Interest on Opr. Capital	Dol	37,343.95	0.11	4,148.91	21.50
Total Variable Costs				23,020.38	119.26

TABLE R-6
FIXED COSTS FOR AN AVERAGE RANCH IN SIZE CLASS 2

Ownership Costs	Value	Cost/Brood Cow
Machinery	6,870.43	35.60
Equipment	5,322.85	27.58
Livestock	6,384.77	33.08
Land Taxes	1,540.11	7.98
Total Ownership Costs	20,118.16	104.24
Other Costs	<u>48,231.50</u>	<u>249.90</u>
Total of All Costs	91,370.04	473.42

TABLE R-7
PRODUCTION RECEIPTS FOR AN AVERAGE RANCH IN SIZE CLASS 3

Production Item	CWT*	Price/Cwt	Number of Head	Total Value	Value/Brood Cow
Steer Calves	5.18	63.75	133	43,919.93	
Heifer Calves	4.96	55.25	93	25,485.72	
Cull Cows	10.00	36.15	35	<u>12,652.50</u>	
Total Receipts				80,058.15	254.05

*CWT = hundred weight

TABLE R-8
VARIABLE COSTS FOR AN AVERAGE RANCH IN SIZE CLASS 3

Item	Units	Number of Units	Price	Value	Cost/Brood Cow
Pub. Graz. BLM	AUMs	108	1.86	200.88	.62
Private Range	AUMs	2,080	0	0	0
Past. Rent/Lease	AUMs	1,061	9.45	10,026.45	31.04
Hay (Produced)	TN	333.35	18.00	6,000.30	18.58
Hay (Purchased)	TN	57	63.12	3,597.84	11.14
Protein Supp.	TN	7	230.00	1,610.00	4.98
Barley	BU	701.4	2.15	1,508.01	4.67
Salt & Minerals	CWT	118.4	5.62	665.41	2.06
Vet Medicine	Dol	3,443.00	1.00	3,443.00	10.66
Trucking	Dol	549.00	1.00	549.00	1.70
Marketing	Dol	1,379.00	1.00	1,379.00	4.27
Hired Labor	Hr	0	4.10	0	0
Mach. Fuel & Lube				5,304.60	16.42
Mach. Repair				3,363.11	10.41
Equip. Fuel & Lube				130.34	.40
Equip. Repair				1,785.55	5.53
Interest on Opr. Capital	Dol	62,364.40	0.11	<u>6,860.08</u>	<u>21.24</u>
Total Variable Costs				46,423.57	143.72

TABLE R-9
FIXED COSTS FOR AN AVERAGE RANCH IN SIZE CLASS 3

Ownership Costs	Value	Cost/Brood Cow
Machinery	11,473.61	35.52
Equipment	8,889.16	27.52
Livestock	10,662.56	33.01
Land Taxes	2,571.98	7.96
Total Ownership Costs	<u>33,597.31</u>	<u>104.01</u>
Other Costs	<u>80,546.60</u>	<u>249.37</u>
Total of All Costs	160,567.48	497.11

TABLE R-10
PRODUCTION RECEIPTS FOR AN AVERAGE RANCH IN SIZE CLASS 4

Production Item	CWT*	Price/Cwt	Number of Head	Total Value	Value/Brood Cow
Steer Calves	5.18	63.75	324	106,992.90	138.95
Heifer Calves	4.96	55.25	231	63,303.24	82.21
Cull Cows	10.00	36.15	77	<u>27,835.50</u>	<u>36.15</u>
Total Receipts				198,131.64	257.31

*CWT = hundred weight

TABLE R-11
VARIABLE COSTS FOR AN AVERAGE RANCH IN SIZE CLASS 4

Item	Units	Number of Units	Price	Value	Cost/Brood Cow
Pub. Graz. BLM	AUMs	192	1.86	357.12	.46
Private Range	AUMs	6,982	0	0	0
Past. Rent/Lease	AUMs	528	9.45	4,989.60	6.48
Hay (Produced)	TN	805	19.59	15,769.95	20.48
Hay (Purchased)	TN	62.5	63.12	3,945.00	5.12
Protein Supp.	TN	9.7	230.00	2,231.00	2.90
Barley	BU	2,144	2.15	4,609.60	5.99
Salt & Minerals	CWT	277	5.62	1,556.74	2.02
Vet Medicine	Dol	5,094.00	1.00	5,094.00	6.62
Trucking	Dol	2,145.00	1.00	2,145.00	2.79
Marketing	Dol	1,581.00	1.00	1,581.00	2.05
Hired Labor	Hr	2	4.10	8.20	.01
Mach. Fuel & Lube				6,505.74	8.45
Mach. Repair				4,966.74	6.45
Equip. Fuel & Lube				231.00	.30
Equip. Repair				3,001.01	3.90
Interest on Opr. Capital	Dol	80,442.60	0.11	<u>8,848.69</u>	<u>11.49</u>
Total Variable Costs				65,840.39	85.51

TABLE R-12
FIXED COSTS FOR AN AVERAGE RANCH IN SIZE CLASS 4

Ownership Costs	Value	Cost/Brood Cow
Machinery	17,223.25	22.37
Equipment	13,490.89	17.52
Livestock	24,970.02	32.43
Land Taxes	<u>4,768.30</u>	<u>6.19</u>
Total Ownership Costs	60,452.46	78.51
Other Costs	<u>95,877.70</u>	<u>124.52</u>
Total of All Costs	222,048.33	288.37